

Pat Appl. 09/902,227, reply to Office Action, 2nd of July 2009

"time-dependent mapping of positions" and "halftoning converting intensities into surface coverages of basic colors"), and plays another derived series of notes (here: "a target image rendered on a computer display"). Therefore, it should be considered as statutory (MPEP 2106-IV-(b)).

In addition the steps of "mapping of positions according to a time-dependent animation transformation" and of "halftoning" which "adapts the color of the visual motives to colors of the two-dimensional original image" are specialized steps incorporating narrow limits and therefore fulfil requirements in respect to process claims in view of *In re Bilski* (88 USPQ2d 1385, Fed Cir. 2008).

Amended claim 1 and correspondingly amended claims 24, 34, and 38 as well as their dependent claims should therefore now be accepted as statutory claims.

Argument F2. Points 4 of OA: Rejection of independent claim 24 due to "non-functional descriptive material" and not falling within "four statutory categories of invention".

Reply: Claim 24 has been amended as follows:

"A computing system rendering on a computer display a target image comprising a succession of target image instances which differ from each other by an embedded microstructure which evolves smoothly over time, said computing system rendering from an original two-dimensional image said succession of target image instances comprising said embedded microstructure evolving over time, where said computer system comprises a computing module mapping positions ... and comprises a computing module for halftoning said two-dimensional original image; ..."

Claim 24 should now be statutory, since in the present case, the computing system and its computing modules are assimilated to an apparatus whose parts perform the different operations and yield tangible and useful results ("show on a computer display visually attractive and useful information").

Point 7 of OA: Rejection of independent claims 1, 3-5, 7, 10, 13, 24-28, 34-38 according to USC 103(a) due to Finkelstein, "Image Mosaics" in view of Browne et al (US Pat. 6,504,545 B1).

General comments in respect to the rejection of independent claims 1, 3-5, 7, 10, 13, 24-28, 34-38 by arguing that they are anticipated by the paper of Finkelstein, in view of Browne et al (US Pat. 6,504,545 B1).

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Argument H1:

The invention of Finkelstein is completely different from ours: he creates an image mosaic made of individual tiles representing themselves variable intensity images. His method implies "selecting and placing individual image tiles into the grid (Finkelstein, p. 7, section 4.3 1st paragraph). This involves "searching for the most similar image tile" (Finkelstein, p. 7, 3rd paragraph). His method also involves "varying the brightness of the tile images composed of shades of gray" (Finkelstein, p. 3, 6th to 8th line below the Figure caption). In contrast, our method does (a) neither require searching for "similar" microstructure nor a "placement" of the microstructure and (b) performs a halftoning operation instead of adapting the brightness of the individual tiles.

Argument H2:

The invention described in Finkelstein's paper aims at creating an "image mosaic, a collection of small images arranged in such a way that when they are seen together from a distance they suggest a larger image" (Finkelstein, page 1, abstract, lines 1-3).

As can be seen from the examples in Finkelstein's Figs. 1, 3, and 7, the image mosaic is composed of the small image tiles whose boundaries have a strong impact on the global view and strongly disturb the original image.

Our invention is completely different from Finkelstein's method. In our invention, the target image is not an assembly of small image tiles; we really show as target image the global non-tiled image embedding a microstructure made of visual motive elements (text, logo, symbol, ornament).

In order to reinforce this distinction we propose to amend independent claim 1, 24, 34 and 36, by adding the term "spatially continuous" when characterizing the target image and by specifying that "said visual motive elements evolve smoothly and continuously".

Examiner statement 7, p. 5, claim 34e, and p. 9, claim 5 :

Argument H3

Finkelstein's method does not use halftoning to render his mosaic image. By definition, halftoning maps a continuous tone image into either a two tone image (black/white) or into an image having a limited number of colorants. The method of Finkelstein however transforms a continuous image into another continuous image ($F:R \rightarrow R$), see Finkelstein, page 8, 3rd paragraph: "correction function $F:R \rightarrow R$ maps a color x in the image tile to a color $F(x)$ in the final mosaic, such that the region of the mosaic covered by the image tile will have the average color a ."

Therefore, since Finkelstein method maps a continuous tone into another continuous tone, Finkelstein's method does not comprise a halftoning operation.

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As can be seen in Finkelstein's Figs. 4c, 4d, and 4e, continuous tones are present within his image tiles.

In order to reinforce the fact that we use halftoning in the traditional sense, we add in step (e) of claim 34 and in the other independent claims 1, 24, 34 a specification of "halftoning" as "converting intensities into surface coverages of a limited set of basic colors".

Argument H4 (Examiner statement 7, p. 4, claim 34c):

Finkelstein uses image tiles to create his mosaic image. The image tiles themselves, could contain symbols such as the symbols present in a scanned banknote. In our invention however, the microstructure is formed only by visual motives (text, logo, symbol, ornament) and not by image tiles.

To reinforce this distinction, we propose to amend claim 34c, as well as independent claims 1, 24, 36 as follows:

"where said embedded microstructure ~~comprises~~ is made of visual motive elements selected from a set of text, logo, symbol and ornament."

Argument H5 (Examiner statement 7, p. 5, last two paragraphs and p. 6 b, reference to Brown US 6,504,545)):

Finkelstein does not teach that the microstructure evolves spatially according to a time-dependent animation transformation.

Examiner makes a reference to animations present in Browns patent. However these animations apply to the "automated generation of continuous cyclic animation for industry standard typefaces (for example Courier and Times New Roman)", Brown, col. 10, lines 4-5. Clearly the animations in Browns patent have a completely different purpose: they create typographic characters changing their shapes and their texture (Brown, Figs. 13a to 13d, 15a to 15d, 16a to 16d). In Brown's invention, there is no adaptation of colors of the microstructure (or of Brown's typefaces) to the colors of the original two-dimensional image.

Therefore, it would not have been obvious to infer from the animations of "Brown's character glyphs, outlines or texture" (col. 10, lines 9-14) our time-dependent animation transformation yielding a spatially evolving microstructure whose colors are adapted to the colors of the original two-dimensional image.

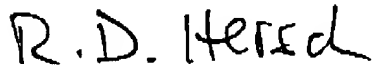
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Conclusions

The amendments described in Arguments F1 and F2 should allow claims 1, 3-5, 7, 10, 13, 24-28, 34-38 to be considered as statutory.

Arguments H1, H2, H3, H4 and H5 demonstrate that Finkelstein's and Bowne's inventions are completely distinct from the instant invention. The present amendments to the claims provide now a very clear distinction between Finkelstein's invention and our invention. The amended claims should therefore allow the application to issue.

Respectfully



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